Weight Gain During Pregnancy

Since fetal and infant deaths are often associated with preterm delivery, those mothers would have less chance than others to gain 15 pounds. Thus, Item 6 of the Appendix B tables should be modified to reflect the gestation-specific *adequacy* of weight gain rather than total weight gain. Even then, the fetal death rate for inadequate gain may be biased upward due to a time lag between fetal death and delivery during which a woman may be unlikely to gain additional weight.

From the Institute of Medicine, the chart of Appendix D shows recommended levels of weight gain for normal-weight women. Applying these criteria to the 1988-91 statewide data, Table 7 shows the relative risks for fetal, neonatal, and postneonatal mortality among mothers whose weight gain was less than adequate. Less-than-adequate gain is clearly a risk factor for fetal and neonatal death, although this relative risk is much smaller than that for weight gain under 15 pounds (Table 6), due to the adjustment for gestational age.

Notes: 1) Due to cases of unknown weight gain or unknown/implausible gestation, the percentage of births with unknown adequacy of weight gain is high—six percent for whites and eight percent for nonwhites. Among these births, the death rates are very high.

2) The recommended weight gain at term is 25 pounds. Under 15 pounds is used here as a very high-risk category.

MAJOR FINDINGS

- The postneonatal death rate of white infants weighing 1500-2499 grams at birth has increased, but the numerical increase is only 32 deaths more than expected during the 1988-91 period (applying the 1977-81 death rate).
- Fetal mortality under 1500 grams and neonatal and postneonatal mortality at 1500-2499 grams are higher for whites than nonwhites.
- For both race groups, the percentage of newborns weighing under 2500 grams has changed very little over the last decade.
- The number of white and nonwhite live births each rose about 22 percent between 1981 and 1991 with large increases among unwed and older mothers. The number and percentage of mothers with history of a previous live born now dead declined.
- Following some rather substantial changes in the relative risk associated with several sociodemographic risk factors, maternal history of a previous live born now dead is now the strongest risk factor for fetal and neonatal mortality and nonwhite postneonatal mortality.
- Low education is strongly associated with both white and nonwhite postneonatal mortality.

TABLE 7

Relative Risk of Fetal, Neonatal, and Postneonatal Death*
by Race and Weight Gain
North Carolina 1988-91

	Whites			Nonwhites		
Weight Gain	Fetal	Neonatal	Postneonatal	Fetal	Neonatal	Postneonatal
Less than Adequate	2.33	2.31	1.64	1.96	1.88	1.46

*Relative risk is the death rate for mothers with less than adequate weight gain divided by the death rate for mothers with adequate weight gain. Adequate gain is the range denoted by the minimum and maximum amounts of Appendix D.